

## **REMARKS**

### **I. Introduction**

Claims 21 to 36 are pending in the present application. In view of the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

### **II. Rejection of Claims 21 to 24, 27 to 29, and 32 Under 35 U.S.C. § 103(a)**

Claims 21 to 24, 27 to 29, and 32 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of U.S. Patent No. 6,171,055 (“Vos et al.”) and that which the Final Office Action characterized as Admitted Prior Art (“the Alleged APA”).<sup>1</sup> It is respectfully submitted that the combination of Vos et al. and the Alleged APA does not render unpatentable the present claims for at least the following reasons.

In order for a claim to be rejected for obviousness under 35 U.S.C. § 103(a), the prior art must teach or suggest each element of the claim. See Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 934 (Fed. Cir. 1990), cert. denied, 111 S. Ct. 296 (1990); In re Bond, 910 F.2d 831, 834 (Fed. Cir. 1990). In addition, as clearly indicated by the Supreme Court, it is “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed. See KSR Int’l Co. v. Teleflex, Inc., 127 S. Ct. 1727 (2007). Further, the Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. M.P.E.P. §2143.

Claim 21 relates to a multivalve control system, including, *inter alia*, a controlled multivalve system; a plurality of controllers; a plurality of comparators; and a conversion device, input variables of the conversion device corresponding to output variables of the controllers, the conversion device configured to calculate, at least from the output variables of the controllers, the correcting variables, *the conversion device configured to superimpose, on the output variables of the controllers, an input control component that is a function of an actual value to calculate the correcting variables*. Claims 27 and 32 include features analogous to the features included in claim 21.

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<sup>1</sup> While the Final Office Action appears to refer to U.S. Patent Application Publication No. 2006/0004470 (“the ’470 publication”) as “Applicant’s Admitted Prior Art,” the ’470 publication is the publication of the instant application. Thus, the ’470 publication does not itself constitute prior art with respect to the present application.

The combination of Vos et al. and the Alleged APA does not disclose, or even suggest, all of the claimed features of claims 21, 27, and 32. Specifically, Vos et al. does not even refer to a conversion device. Instead, Vos et al. merely describes controllers 66, 68 connected directly to the engine, drivetrain, propeller, and actuators dynamics in Figure 2. Indeed, the Final Office Action at page 5 admits that “Vos does not expressly teach to a conversion device ..., the conversion device configured to superimpose, on the output variable of the controllers (col. 7, lines 2-8 and 10-15), an input control component that is a function of an actual value to calculate the correcting variables (col. 6, lines 1-8 and 13-19).” Although the Final Office Action cites column 6, lines 1 to 8, and 13 to 19, and column 7, lines 2 to 8, and 10 to 15 as reproduced above, these cited sections merely state that the FADEC of Vos et al. receives inputs from various sensors (column 6, lines 1 to 8, and 13 to 19), and outputs control signals to various servos (column 7, lines 2 to 8, and 10 to 15), without any intervening conversion device. Thus, Vos et al. does not disclose, or even suggest, the features of *a conversion device configured to superimpose, on the output variables of the controllers, an input control component that is a function of an actual value to calculate the correcting variables.*

Further, the Alleged APA also does not disclose all of the features included in claims 21, 27, and 32. Nonetheless, the Final Office Action at pages 3 and 4 asserts the following:

Applicant’s disclosed limitation of “a conversion device configured to superimpose, on the output variables of the controllers (i.e. the controlled multivalue system having several correcting variables as input variables), an input control component that is a function of an actual value (i.e. a conversion device whose input variables are the output variables made available by the controllers) to calculate the correcting variables (i.e. the conversion device calculating the correcting variables for the controlled multivalue system at least from the output variables of the controllers)” is meet [sic] by Applicant’s disclosed Admitted Prior Art.

Applicant respectfully disagrees. Although the Alleged APA may include a conversion device, nowhere does the Alleged APA disclose the feature of *a conversion device configured to superimpose, on the output variables of the controllers, an input control component that is a function of an actual value to calculate the correcting variables*, as provided for in the context of claims 21, 27, and 32. In this regard, the cited section of the Alleged APA in the Final Office Action at page 3 merely states that a conversion device has as input variables the output

variables from the controllers, and the controllers merely receive control deviations as input variables. Thus, only control deviations are provided as input variables to the conversion device via controllers. However, nowhere does the Alleged APA even refer to an input control component that is a function of an actual value, much less an input control component that is provided to the conversion device. Accordingly, nowhere does the Alleged APA disclose, or even suggest, *a conversion device configured to superimpose, on the output variables of the controllers, an input control component that is a function of an actual value.*

Therefore, the combination of Vos et al. and the Alleged APA does not disclose, or even suggest, the features of *a conversion device configured to superimpose, on the output variables of the controllers, an input control component that is a function of an actual value to calculate the correcting variables*, as provided for in the context of claims 21, 27, and 32.

Accordingly, the combination of Vos et al. and the Alleged APA does not disclose, or even suggest, all of the features included in claims 21, 27, and 32. As such, it is respectfully submitted that the combination of Vos et al. and the Alleged APA does not render unpatentable claims 21, 27, and 32.

As for claims 22 to 24, which ultimately depend from claim 21 and therefore include all of the features included in claim 21, and claims 28 and 29, which depend from claim 27 and therefore include all of the features included in claim 27, it is respectfully submitted that the combination of Vos et al. and the Alleged APA does not render unpatentable these dependent claims for at least the same reasons more fully set forth above.

In view of all the foregoing, withdrawal of this rejection is respectfully requested.

### **III. Rejection of Claims 25, 26, 30, and 31 Under 35 U.S.C. § 103(a)**

Claims 25, 26, 30, and 31 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Vos et al., the Alleged APA, and U.S. Patent No. 5,951,608 ("Osder"). It is respectfully submitted that the combination of Vos et al., the Alleged APA, and Osder does not render unpatentable the presently pending claims for at least the following reasons.

Claims 25 and 26 ultimately depend from claim 21, and claims 30 and 31 ultimately depend from claim 27. As more fully set forth above, the combination of Vos et al. and the Alleged APA does not disclose, or even suggest, all of the

features included in claims 21 and 27. Osder also does not disclose, or even suggest, all of the features included in claims 21 and 27, and thus, fails to cure this critical deficiency.

Accordingly, it is respectfully submitted that the combination of Vos et al., the Alleged APA, and Osder does not disclose, or even suggest, all of the features included in claims 21 and 27, from which claims 25, 26, 30, and 31 ultimately depend. As such, it is respectfully submitted that the combination of Vos et al., the Alleged APA, and Osder does not render unpatentable claims 25, 26, 30, and 31, which ultimately depend from claims 21 and 27.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

#### **IV. Rejection of Claim 33 Under 35 U.S.C. § 103(a)**

Claim 33 was rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Vos et al., the Alleged APA, and U.S. Patent No. 6,856,039 ("Mikhail et al."). It is respectfully submitted that the combination of Vos et al., the Alleged APA, and Mikhail et al. does not render unpatentable claim 33 for at least the following reasons.

Claim 33 depends from claim 32. As more fully set forth above, the combination of Vos et al. and the Alleged APA does not disclose, or even suggest, all of the features included in claim 32. Mikhail et al. also does not disclose, or even suggest, all of the features included in claim 32, and thus, fails to cure this critical deficiency.

Accordingly, it is respectfully submitted that the combination of Vos et al., the Alleged APA, and Mikhail et al. does not disclose, or even suggest, all of the features included in claim 32, from which claim 33 depends. As such, it is respectfully submitted that the combination of Vos et al., the Alleged APA, and Mikhail et al. does not render unpatentable claim 33, which depends from claim 32.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

#### **V. Rejection of Claims 34 to 36 Under 35 U.S.C. § 103(a)**

Claims 34 to 36 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Vos et al., the Alleged APA, Mikhail et al., and Osder. It is respectfully submitted that the combination of Vos et al., the Alleged

APA, Mikhail et al., and Osder does not render unpatentable the present claims for at least the following reasons.

Claims 34 to 36 ultimately depend from claim 32. As more fully set forth above, the combination of Vos et al. and the Alleged APA does not disclose, or even suggest, all of the features included in claim 32. Also, as more fully set forth above, Mikhail et al. and Osder also do not disclose, or even suggest, all of the features included in claim 32, and thus, fail to cure this critical deficiency.

Accordingly, it is respectfully submitted that the combination of Vos et al., the Alleged APA, Mikhail et al., and Osder does not disclose, or even suggest, all of the features included in claim 32, from which claims 34 to 36 ultimately depend. As such, it is respectfully submitted that the combination of Vos et al., the Alleged APA, Mikhail et al., and Osder does not render unpatentable claims 34 to 36, which ultimately depend from claim 32.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

## **VI. Conclusion**

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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By: /Clifford A. Ulrich/  
Clifford A. Ulrich  
Reg. No. 42,194  
KENYON & KENYON LLP  
One Broadway  
New York, New York 10004  
(212) 425-7200  
**CUSTOMER NO. 26646**